

Amendments to the Claims

Claims 1-4 (Canceled)

Claim 5 (New) A multipanel sliding door comprising:

a door header;

a set of n adjacent panels $P = \{P_0, P_1, \dots, P_{n-1}\}$, wherein the panel P_0 is stationary and the remaining $n-1$ panels P_1, P_2, \dots, P_{n-1} are movable in planes substantially parallel the stationary panel P_0 , and the n panels P_0, P_1, \dots, P_{n-1} have an equal width L ;

a set of $n-2$ first racks $CF = \{CF_0, CF_1, \dots, CF_{n-3}\}$ fixedly supported by the door header, wherein lengths of the first racks $CF_0, CF_1, \dots, CF_{n-3}$ are equal to $L, 2L, \dots, (n-2)L$, respectively;

a set of $n-2$ second racks $CP = \{CP_2, CP_3, \dots, CP_{n-1}\}$ attached to or formed unitarily with the panels P_2, P_3, \dots, P_{n-1} , respectively, wherein a length of the racks $CP_2, CP_3, \dots, CP_{n-1}$ is equal to L ,

a set of $n-2$ wheelworks $R = \{R_1, R_2, \dots, R_{n-2}\}$ rotatably mounted on the panels P_1, P_2, \dots, P_{n-2} , respectively, wherein the wheelworks mesh together with the sets of first and second racks, the wheelworks including:

a wheelwork R_1 including a single toothed wheel which is meshed together with the first rack CF_0 and with the second rack CP_2 ; and

$n-3$ wheelworks R_2, R_3, \dots, R_{n-2} each including two coaxial and co-rotating toothed wheels, one of the two coaxial and co-rotating toothed wheels being a first larger diameter toothed wheel that is meshed together with the respective first rack $CF_1, CF_2, \dots, CF_{n-3}$, and another of the two coaxial and co-rotating toothed wheels being a second smaller diameter toothed wheel is meshed together with the respective second rack $CP_3, CP_4, \dots, CP_{n-1}$, wherein a ratio of a diameter D_k of the first larger toothed wheel to a diameter d_k of the second smaller toothed wheel of k -th wheelwork R_k is equal to $k = 2, 3, \dots, n-2$,

wherein $n \geq 3$.